

BBBBBBBBBBBBBBB AAAAAAAA
BBBBBBBBBBBBBBB AAAAAAAA
BBBBBBBBBBBBBBB AAAAAAAA

BBB BBB AAA AAA SSS

BBBBBBBBBBBBBBB AAA AAA SSSSSSSSS
BBBBBBBBBBBBBBB AAA AAA SSSSSSSSS
BBBBBBBBBBBBBBB AAA AAA SSSSSSSSS

BBB BBB AAAAAAAAAAAAAA SSS
BBB BBB AAAAAAAAAAAAAA SSS
BBB BBB AAAAAAAAAAAAAA SSS
BBB BBB AAA AAA SSS
BBB BBB AAA AAA SSS
BBB BBB AAA AAA SSS

BBBBBBBBBBBBBBB AAA AAA SSSSSSSSSSS
BBBBBBBBBBBBBBB AAA AAA SSSSSSSSSSS
BBBBBBBBBBBBBBB AAA AAA SSSSSSSSSSS

BBBBBBBB BBBB
AAAAAAA AAAAAA SSSSSSSS SSSSSSSS CCCCCCCC CCCCCCCC VV VV TTTTTTTT TTTTTTTT RRRRRRRR RRRRRRRR PPPPPP
BBBBBBBB BBBB AA AA SS CC VV VV TT RR RR PP PP
BBBBBBBB BBBB AA AA SS CC VV VV TT RR RR PP PP
BBBBBBBB BBBB AA AA SS CC VV VV TT RR RR PP PP
BBBBBBBB BBBB AA AA SS CC VV VV TT RR RR PP PP
BBBBBBBB BBBB AA AA SSSSSS CC VV VV TT RRRRRRRR PPPPPP
BBBBBBBB BBBB AA AA SSSSSS CC VV VV TT RRRRRRRR PPPPPP
BBBBBBBB BBBB AAAA AA SS CC VV VV TT RR RR PP
BBBBBBBB BBBB AAAA AA SS CC VV VV TT RR RR PP
BBBBBBBB BBBB AA AA SS CC VV VV TT RR RR PP
BBBBBBBB BBBB AA AA SS CC VV VV TT RR RR PP
BBBBBBBB BBBB AA AA SSSSSSSS CCCCCCCC VV VV TT RR RR PP
BBBBBBBB BBBB AA AA SSSSSSSS CCCCCCCC VV VV TT RR RR PP

```

1 0001 0 XTITLE 'BASSCVTRP - Convert real to packed'
2 0002 0 MODULE BASSCVTRP (
3 0003 0 IDENT = '1-004'           ! Convert real to packed
4 0004 0 ) =                      ! File: BASCVTRP.B32 Edit: PLL1004
5 0005 1 BEGIN
6 0006 1
7 0007 1 ****
8 0008 1 *
9 0009 1 * COPYRIGHT (c) 1979, 1980, 1982, 1984 BY
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26 0026 1 *
27 0027 1 *
28 0028 1 ****
29 0029 1
30 0030 1
31 0031 1 ++
32 0032 1 FACILITY: Basic Language Support
33 0033 1
34 0034 1 ABSTRACT:
35 0035 1
36 0036 1 This module contains routines to convert real data types to packed decimal.
37 0037 1 It also contains routines to convert from packed to a real type.
38 0038 1
39 0039 1 These jacket routines are necessary because the OTS routines are JSB routines
40 0040 1 and use R9 to pass a parameter. If an error occurs R9 will not automatically
41 0041 1 be restored and the Basic compiler expects R9 to point at some local storage.
42 0042 1 Note that CALL entry points cause R9 to be saved in the frame.
43 0043 1
44 0044 1 ENVIRONMENT: Runs at any access mode - AST reentrant
45 0045 1
46 0046 1 AUTHOR: Pamela L. Levesque, CREATION DATE: 15-April-1982
47 0047 1
48 0048 1 MODIFIED BY:
49 0049 1
50 0050 1 1-001 - Original. PLL 15-Apr-1982
51 0051 1 1-002 - Clean up some comments. PLL 21-Apr-1982
52 0052 1 1-003 - Add entry points for rounding. PLL 7-Jun-1982
53 0053 1 1-004 - Before reporting decimal overflow error, must check BASIC frame to
54 0054 1 ensure that "/OVERFLOW=NODEC" was not specified during the compile.
55 0055 1 DG 7-Mar-1984
56 0056 1 --
57 0057 1

```

```
59      0058 1 %SBTTL 'Declarations'  
60      0059 1  
61      0060 1 ! SWITCHES:  
62      0061 1  
63      0062 1  
64      0063 1 SWITCHES ADDRESSING_MODE (EXTERNAL = GENERAL, NONEXTERNAL = WORD_RELATIVE);  
65      0064 1  
66      0065 1  
67      0066 1 ! LINKAGES:  
68      0067 1  
69      0068 1  
70      0069 1 ! LINKAGE  
71      0070 1     JSB_CVT = JSB (REGISTER = 6, REGISTER = 7, REGISTER = 8, REGISTER = 9)  
72          : PRESERVE (2, 3, 4, 5, 10, 11);  
73      0072 1  
74      0073 1 ! TABLE OF CONTENTS:  
75      0074 1  
76      0075 1  
77      0076 1 FORWARD ROUTINE  
78      0077 1  
79      0078 1     BASSCVTFP : NOVALUE;           ! convert float to packed  
80      0079 1     BASSCVTDP : NOVALUE;           ! convert double to packed  
81      0080 1     BASSCVTGP : NOVALUE;           ! convert gfloat to packed  
82      0081 1     BASSCVTHP : NOVALUE;           ! convert hfloat to packed  
83      0082 1     BASSCVTRFP : NOVALUE;          ! convert float to packed (rounded)  
84      0083 1     BASSCVTRDP : NOVALUE;          ! convert double to packed (rounded)  
85      0084 1     BASSCVTRGP : NOVALUE;          ! convert gfloat to packed (rounded)  
86      0085 1     BASSCVTRHP : NOVALUE;          ! convert hfloat to packed (rounded)  
87      0086 1     BASSCVTPF : NOVALUE;           ! convert packed to float  
88      0087 1     BASSCVTPD : NOVALUE;           ! convert packed to double  
89      0088 1     BASSCVTPG : NOVALUE;           ! convert packed to gfloat  
90      0089 1     BASSCVTPH : NOVALUE;           ! convert packed to hfloat  
91      0090 1  
92      0091 1 ! INCLUDE FILES:  
93      0092 1  
94      0093 1 !  
95      0094 1  
96      0095 1 LIBRARY 'RTLSTARLE';        ! System symbols, typically from SYSLIBRARY:STARLET.L32  
97      0096 1  
98      0097 1 REQUIRE 'RTLIN:RTLPSECT';       ! Define PSECT declarations macros  
99      0192 1 REQUIRE 'RTLIN:BASFRAME.REQ';   ! BSF symbols  
100     0395 1  
101     0396 1  
102     0397 1 ! MACROS:  
103     0398 1  
104     0399 1  
105     0400 1 ! MACRO  
106     M 0401 1     FIND FRAME (F) =  
107     M 0402 1         BEGIN  
108     M 0403 1  
109     M 0404 1         BUILTIN  
110     M 0405 1             FP;           ! Frame pointer  
111     M 0406 1  
112     M 0407 1         F = .FP;  
113     M 0408 1         DO  
114     M 0409 1             BEGIN  
115     M 0410 1                 F = .F [BSFSA_SAVED_FP];           ! search back for Basic frame
```

```

116 M 0411 1           END
117 M 0412 1           UNTIL (.F [BSFSA_HANDLER] EQLA BASSHANDLER OR
118 M 0413 1           .F EQ[ 0]);
119 M 0414 1
120 M 0415 1           END;
121 0416 1
122 0417 1
123 0418 1           %: EQUATED SYMBOLS:
124 0419 1           NONE
125 0420 1
126 0421 1
127 0422 1           FIELDS:
128 0423 1
129 0424 1           NONE
130 0425 1
131 0426 1           PSECTS:
132 0427 1
133 0428 1           DECLARE_PSECTS (BAS);          ! Declare PSECTS for BASS facility
134 0429 1
135 0430 1           OWN STORAGE:
136 0431 1
137 0432 1           NONE
138 0433 1
139 0434 1           EXTERNAL REFERENCES:
140 0435 1
141 0436 1
142 0437 1           EXTERNAL ROUTINE
143 0438 1
144 0439 1           BASSHANDLER
145 0440 1           OTSSCVTFP_R9 : JSB_CVT.          ! OTS conv float to packed
146 0441 1           OTSSCVTDP_R9 : JSB_CVT.        ! OTS conv dbl to packed
147 0442 1           OTSSCVTGP_R9 : JSB_CVT.        ! OTS conv gfloat to packed
148 0443 1           OTSSCVTHP_R9 : JSB_CVT.        ! OTS conv hfloat to packed
149 0444 1           OTSSCVTRFP_R9 : JSB_CVT.       ! OTS conv float to packed (rounded)
150 0445 1           OTSSCVTRDP_R9 : JSB_CVT.       ! OTS conv dbl to packed (rounded)
151 0446 1           OTSSCVTRGP_R9 : JSB_CVT.       ! OTS conv gfloat to packed (rounded)
152 0447 1           OTSSCVTRHP_R9 : JSB_CVT.       ! OTS conv hfloat to packed (rounded)
153 0448 1           OTSSCVTPF_R9 : JSB_CVT.        ! OTS conv packed to float
154 0449 1           OTSSCVTPD_R9 : JSB_CVT.        ! OTS conv packed to dbl
155 0450 1           OTSSCVTPG_R9 : JSB_CVT.        ! OTS conv packed to gfloat
156 0451 1           OTSSCVTPH_R9 : JSB_CVT.        ! OTS conv packed to hfloat
157 0452 1           BASS$SIG$NAL : NOVA[UE];      ! signal non-fatal error
158 0453 1
159 0454 1           EXTERNAL LITERAL          ! Condition value symbols
160 0455 1           BASS$K DECERR : UNSIGNED (8);   ! decimal error or overflow

```

```

: 162    0456 1 %SBTTL 'BASS$CVT'FP - Convert float to packed'
: 163    0457 1 GLOBAL ROUTINE BASS$CVTFP (
: 164        DEST,
: 165        DESTLEN,
: 166        SRC,
: 167        SCALE
: 168        ) : NOVALUE =
: 169    0463 1
: 170    0464 1 ++
: 171    0465 1 FUNCTIONAL DESCRIPTION:
: 172    0466 1
: 173    0467 1 Converts a single floating number to packed.
: 174    0468 1
: 175    0469 1 CALLING SEQUENCE:
: 176    0470 1
: 177    0471 1     BASS$CVTFP (DEST.wp.r, DESTLEN.rl.v, SRC.rf.r, SCALE.rl.v)
: 178    0472 1
: 179    0473 1 FORMAL PARAMETERS:
: 180    0474 1
: 181    0475 1     DEST.wp.r      place to store the converted number
: 182    0476 1     DESTLEN.rl.v   number of digits in the destination
: 183    0477 1     SRC.rf.r      number to be converted
: 184    0478 1     SCALE.rl.v    power of ten by which the internal
: 185    0479 1             representation of the source must be
: 186    0480 1             multiplied to scale the same as the
: 187    0481 1             internal representation of the dest.
: 188    0482 1
: 189    0483 1 IMPLICIT INPUTS:
: 190    0484 1     NONE
: 191    0485 1
: 192    0486 1
: 193    0487 1 IMPLICIT OUTPUTS:
: 194    0488 1     NONE
: 195    0489 1
: 196    0490 1
: 197    0491 1 COMPLETION STATUS:
: 198    0492 1
: 199    0493 1     NONE
: 200    0494 1
: 201    0495 1
: 202    0496 1 SIDE EFFECTS:
: 203    0497 1     May signal decimal overflow if an error occurs in the OTS
: 204    0498 1             conversion routine
: 205    0499 1
: 206    0500 1 --+
: 207    0501 1
: 208    0502 2 BEGIN
: 209    0503 2
: 210    0504 2 LOCAL
: 211    0505 2     FMP : REF BLOCK [0,BYTE] FIELD (BSF$FCD),      ! Ptr to BASIC frame
: 212    0506 2             STATUS;
: 213    0507 2
: 214    0508 2             STATUS = OTSS$CVTFP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);
: 215    0509 2             IF (NOT .STATUS)
: 216    0510 2             THEN
: 217    0511 2             BEGIN
: 218    0512 2

```

BASS\$CVTRP
1-004

BASS\$CVTRP - Convert real to packed
BASS\$CVT'FP - Convert float to packed

F 8
16-Sep-1984 00:16:29 VAX-11 Bliss-32 v4.0-742
14-Sep-1984 11:54:49 [BASRTL.SRC]BASCVTRP.B32;1

Page 5
(3)

```
: 219    0513 3      FIND FRAME (FMP);  
: 220    0514 3      IF (.FMP NEQ 0) AND (.FMP [BSFW_FCD_FLAGS] AND BSFSM_FCD_DV) NEQ 0  
: 221    0515 3      THEN  
: 222    0516 3      BAS$SIGNAL (BASSK_DECERR);  
: 223    0517 3  
: 224    0518 2      END;  
: 225    0519 1      END;          ! routine BASS$CVTFP
```

.TITLE BASS\$CVTRP BASS\$CVTRP - Convert real to packed
.IDENT \1-004\

.EXTRN BASS\$HANDLER OTSS\$CVTFP R9
.EXTRN OTSS\$CVTDP R9, OTSS\$CVTGP R9
.EXTRN OTSS\$CVTHP R9, OTSS\$CVTRFP R9
.EXTRN OTSS\$CVTRDP R9, OTSS\$CVTRGP R9
.EXTRN OTSS\$CVTRHP R9, OTSS\$CVTPF R9
.EXTRN OTSS\$CVTPD R9, OTSS\$CVTPG R9
.EXTRN OTSS\$CVTPH R9, BAS\$SIGNAL
.EXTRN BASSK_DECERR

.PSECT _BASS\$CODE,NOWRT, SHR, PIC,2

.ENTRY BASS\$CVTFP, Save R2,R3,R4,R5,R6,R7,R8,R9,- R10,R11 0457
 MOVL DEST, R9 0508
 MOVL DESTLEN, R8
 MOVL SRC, R7
 MOVL SCALE, R6
 JSB OTSS\$CVTFP R9
 BLBS STATUS, 3\$ 0509
 MOVL FP, FMP 0513
 MOVL 12(FMP), FMP
 MOVAB BASS\$HANDLER, R1
 CMPL (FMP), R1
 BEQL 2\$
 TSTL FMP
 BNEQ 1\$ 0514
 TSTL FMP
 BEQL 3\$
 BBC #10, -26(FMP), 3\$
 MOVZBL #BASSK_DECERR, -(SP) 0516
 CALLS #1, BAS\$SIGNAL
 RET 0519

OFFC 00000
59 04 AC D0 00002
58 08 AC D0 00006
57 0C AC D0 0000A
56 10 AC D0 0000E
 00000000G 00 16 00012
2B 50 E8 00018
50 5D D0 0001B
50 0C A0 D0 0001E 1\$: 00000000G 00 9E 00022
51 60 D1 00029
 00000000G 00 04 13 0002C
 00000000G 00 50 D5 0002E
 00000000G 00 EC 12 00030
 00000000G 00 50 D5 00032 2\$: 00000000G 00 10 13 00034
 00000000G 00 08 0A E1 00036
 00000000G 00 01 8F 9A 0003B
 00000000G 00 01 FB 0003F
 00000000G 00 04 00046 3\$: 00000000G 00 04 00046 3\$:

: Routine Size: 71 bytes. Routine Base: _BASS\$CODE + 0000

```

: 227      0520 1 %SBTTL 'BASS$CVTDP - Convert double to packed'
: 228      0521 1 GLOBAL ROUTINE BASS$CVTDP (
: 229          0522 1     DEST,
: 230          0523 1     DESTLEN,
: 231          0524 1     SRC,
: 232          0525 1     SCALE
: 233          0526 1 ) : NOVALUE =
: 234          0527 1
: 235          0528 1 !++ FUNCTIONAL DESCRIPTION:
: 236          0529 1 Converts a double floating number to packed.
: 237          0530 1
: 238          0531 1 CALLING SEQUENCE:
: 239          0532 1
: 240          0533 1     BASS$CVTDP (DEST.wp.r, DESTLEN.rl.v, SRC.rd.r, SCALE.rl.v)
: 241          0534 1
: 242          0535 1 FORMAL PARAMETERS:
: 243          0536 1
: 244          0537 1
: 245          0538 1
: 246          0539 1     DEST.wp.r      place to store the converted number
: 247          0540 1     DESTLEN.rl.v   number of digits in the destination
: 248          0541 1     SRC.rd.r      number to be converted
: 249          0542 1     SCALE.rl.v    power of ten by which the internal
: 250          0543 1     representation of the sourc must be
: 251          0544 1     multiplied to scale the same as the
: 252          0545 1     internal representation of the dest.
: 253          0546 1
: 254          0547 1 IMPLICIT INPUTS:
: 255          0548 1     NONE
: 256          0549 1
: 257          0550 1 IMPLICIT OUTPUTS:
: 258          0551 1     NONE
: 259          0552 1
: 260          0553 1 COMPLETION STATUS:
: 261          0554 1     NONE
: 262          0555 1
: 263          0556 1
: 264          0557 1
: 265          0558 1
: 266          0559 1 SIDE EFFECTS:
: 267          0560 1
: 268          0561 1     May signal decimal overflow if overflow occurs in the OTS
: 269          0562 1     conversion routine
: 270          0563 1
: 271          0564 1 -- BEGIN
: 272          0565 1
: 273          0566 2 LOCAL
: 274          0567 2
: 275          0568 2
: 276          0569 2     FMP : REF BLOCK [0, BYTE] FIELD (BSF$FC0),      ! Ptr to BASIC frame
: 277          0570 2     STATUS;
: 278          0571 2
: 279          0572 2     STATUS = OTSS$CVTDP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);
: 280          0573 3     IF (NOT .STATUS)
: 281          0574 2     THEN
: 282          0575 3     BEGIN
: 283          0576 3

```

BASS\$CVTRP
1-004

BASS\$CVTRP - Convert real to packed
BASS\$CVTDP - Convert double to packed

H 8
16-Sep-1984 00:16:29 VAX-11 Bliss-32 v4.0-742
14-Sep-1984 11:54:49 [BASRTL.SRC]BASCVTRP.B32;1

Page 7
(4)

```
: 284    0577 3      FIND_FRAME (FMP);  
: 285    0578 3      IF (.FMP NEQ 0) AND (.FMP [BSFSW_FCD_FLAGS] AND BSFSM_FCD_DV) NEQ 0  
: 286    0579 3      THEN ! Find BASIC frame  
: 287    0580 3      BASSSIGNAL (BASSK_DECERR);  
: 288    0581 3      ! If "/OVERFLOW = NODEC" not set  
: 289    0582 3      END:  
: 290    0583 2      END:  
: 291    0584 1      ! End of routine BASS$CVTDP
```

		OFFC 00000	.ENTRY	BASS\$CVTDP, Save R2,R3,R4,R5,R6,R7,R8,R9,-	0521
59	04	AC D0 00002	MOVL	R10, R11	0572
58	08	AC D0 00006	MOVL	DEST, R9	
57	0C	AC D0 0000A	MOVL	DESTLEN, R8	
56	10	AC D0 0000E	MOVL	SRC, R7	
	00000000G	00 16 00012	MOVL	SCALE, R6	
2B	50	E8 00018	JSB	OTSSCVTDP R9	0573
50	5D	D0 00018	BLBS	STATUS, 3S	0577
50	OC	A0 D0 0001E	1\$: MOVL	FP, FMP	
51	00000000G	00 9E 00022	MOVAB	12(FMP), FMP	
51	60	D1 00029	(Cmpl)	BASSHANDLER, R1	
		04 13 0002C	BEQL	(FMP), R1	
		50 D5 0002E	TSTL	2S	
		EC 12 00030	BNEQ	FMP	
		50 D5 00032	2\$: TSTL	1S	
		10 13 00034	BEQL	FMP	0578
0B	E6 A0	0A E1 00036	BBC	#10, -26(FMP), 3S	
	00G 7E	8F 9A 0003B	MOVZBL	#BASSK DECERR, -(SP)	0580
	00	01 FB 0003F	CALLS	#1, BASSSIGNAL	
		04 00046	3\$: RET		0584

: Routine Size: 71 bytes, Routine Base: _BASS\$CODE + 0047

```

: 293    0585 1 %SBTTL 'BASS$CVTGP - Convert gfloat to packed'
: 294    0586 1 GLOBAL ROUTINE BASS$CVTGP (
: 295        0587 1      DEST,
: 296        0588 1      DESTLEN,
: 297        0589 1      SRC,
: 298        0590 1      SCALE
: 299        0591 1      ) : NOVALUE =
: 300    0592 1
: 301    0593 1 ++
: 302    0594 1      FUNCTIONAL DESCRIPTION:
: 303    0595 1
: 304    0596 1      Converts a g floating number to packed.
: 305    0597 1
: 306    0598 1      CALLING SEQUENCE:
: 307    0599 1
: 308    0600 1      BASS$CVTGP (DEST.wp.r, DESTLEN.rl.v, SRC.rg.r, SCALE.rl.v)
: 309    0601 1
: 310    0602 1      FORMAL PARAMETERS:
: 311    0603 1
: 312    0604 1      DEST.wp.r      place to store the converted number
: 313    0605 1      DESTLEN.rl.v   number of digits in the destination
: 314    0606 1      SRC.rg.r      number to be converted
: 315    0607 1      SCALE.rl.v    power of ten by which the internal
: 316    0608 1      representation of the source must be
: 317    0609 1      multiplied to scale the same as the
: 318    0610 1      internal representation of the dest.
: 319    0611 1
: 320    0612 1      IMPLICIT INPUTS:
: 321    0613 1      NONE
: 322    0614 1
: 323    0615 1      IMPLICIT OUTPUTS:
: 324    0616 1      NONE
: 325    0617 1
: 326    0618 1      COMPLETION STATUS:
: 327    0619 1      NONE
: 328    0620 1
: 329    0621 1
: 330    0622 1
: 331    0623 1
: 332    0624 1      SIDE EFFECTS:
: 333    0625 1
: 334    0626 1      May signal decimal overflow if that error occurs in the OTS
: 335    0627 1      conversion routine
: 336    0628 1
: 337    0629 1      --
: 338    0630 1
: 339    0631 2      BEGIN
: 340    0632 2
: 341    0633 2      LOCAL
: 342    0634 2      FMP : REF BLOCK [0,BYTE] FIELD (BSF$FC0),      ! Ptr to BASIC frame
: 343    0635 2      STATUS;
: 344    0636 2
: 345    0637 2      STATUS = OTSS$CVTGP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);
: 346    0638 3      IF (NOT .STATUS)
: 347    0639 2      THEN
: 348    0640 3      BEGIN
: 349    0641 3

```

BASSCVTRP
1-004

BASSCVTRP - Convert real to packed
BASSCVTGP - Convert gfloat to packed

J 8
16-Sep-1984 00:16:29 VAX-11 Bliss-32 v4.0-742
14-Sep-1984 11:54:49 [BASRTL.SRC]BASCVTRP.B32;1

Page 9
(5)

: 350 0642 3 FIND_FRAME (FMP);
: 351 0643 3 IF (.FMP NEQ 0) AND (.FMP [BSFW_FCD_FLAGS] AND BSFSM_FCD_DV) NEQ 0
: 352 0644 3 THEN ! Find BASIC frame
: 353 0645 3 BAS\$SIGNAL (BASSK_DECERR); ! If "/OVERFLOW = NODEC" not set
: 354 0646 3
: 355 0647 2 END:
: 356 0648 1 END: ! End of routine BASSCVTGP

		OFFC 00000	.ENTRY		
59	04	AC D0 00002	MOVL	R10, R11	: 0586
58	08	AC D0 00006	MOVL	DEST, R9	: 0637
57	0C	AC D0 0000A	MOVL	DESTLEN, R8	
56	10	AC D0 0000E	MOVL	SRC, R7	
	00000000G	00 16 00012	JSB	OTSSCVTGP R9	
2B	50	E8 00018	BLBS	STATUS, 3\$: 0638
50	5D	D0 0001B	MOVL	FP, FMP	: 0642
50	OC	A0 0001E	1\$: MOVL	12(FMP), FMP	
51	00000000G	00 9E 00022	MOVAB	BASSHANDLER, R1	
51	60	D1 00029	(CMLP	(FMP), R1	
	04	13 0002C	BEQL	2\$	
	50	D5 0002E	TSTL	FMP	
	EC	12 00030	BNEQ	1\$	
	50	D5 00032	2\$: TSTL	FMP	: 0643
	10	13 00034	BEQL	3\$	
OB	E6	A0 00036	BBC	#10, -26(FMP), 3\$	
	7E	00G 8F 9A 00038	MOVZBL	#BASSKDECERR, -(SP)	: 0645
	00	01 FB 0003F	CALLS	#1, BAS\$SIGNAL	
	04	00046 3\$:	RET		: 0646

: Routine Size: 71 bytes. Routine Base: _BASSCODE + 008E

```

358 0649 1 %SBTTL 'BASSCVTHP - Convert hfloat to packed'
359 0650 1 GLOBAL ROUTINE BASSCVTHP (
360 0651 1      DEST,
361 0652 1      DESTLEN,
362 0653 1      SRC,
363 0654 1      SCALE
364 0655 1      ) : NOVALUE =
365 0656 1
366 0657 1 ++
367 0658 1      FUNCTIONAL DESCRIPTION:
368 0659 1
369 0660 1      Converts a h floating number to packed.
370 0661 1
371 0662 1      CALLING SEQUENCE:
372 0663 1
373 0664 1      BASSCVTHP (DEST.wp.r, DESTLEN.rl.v, SRC.rh.r, SCALE.rl.v)
374 0665 1
375 0666 1      FORMAL PARAMETERS:
376 0667 1
377 0668 1      DEST.wp.r      place to store the converted number
378 0669 1      DESTLEN.rl.v   number of digits in the destination
379 0670 1      SRC.rh.r      number to be converted
380 0671 1      SCALE.rl.v    power of ten by which the internal
381 0672 1      representation of the source must be
382 0673 1      multiplied to scale the same as the
383 0674 1      internal representation of the dest.
384 0675 1
385 0676 1      IMPLICIT INPUTS:
386 0677 1
387 0678 1      NONE
388 0679 1
389 0680 1      IMPLICIT OUTPUTS:
390 0681 1
391 0682 1
392 0683 1
393 0684 1      COMPLETION STATUS:
394 0685 1
395 0686 1      May signal decimal overflow if that error occurs in the OTS
396 0687 1      conversion routine
397 0688 1
398 0689 1      SIDE EFFECTS:
399 0690 1
400 0691 1
401 0692 1
402 0693 1      --
403 0694 1
404 0695 2      BEGIN
405 0696 2
406 0697 2      LOCAL
407 0698 2      FMP : REF BLOCK [0,BYTE] FIELD (BSF$FCD),      ! Ptr to BASIC frame
408 0699 2      STATUS;
409 0700 2
410 0701 2      STATUS = OTSSCVTHP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);
411 0702 3      IF (NOT .STATUS)
412 0703 3      THEN
413 0704 3      BEGIN
414 0705 3

```

BASS\$CVTRP
1-004

BASS\$CVTRP - Convert real to packed
BASS\$CVTHP - Convert hfloat to packed

L 8
16-Sep-1984 00:16:29 VAX-11 Bliss-32 V4.0-742
14-Sep-1984 11:54:49 [BASRTL.SRC]BASCVTRP.B32;1

Page 11
(6)

: 415 0706 3 FIND FRAME (FMP);
: 416 0707 3 IF (.FMP NEQ 0) AND (.FMP [BSFW_FCD_FLAGS] AND BSFSM_FCD DV) NEQ 0
: 417 0708 3 THEN ! Find BASIC frame
: 418 0709 3 BASS\$SIGNAL (BASSK_DECERR); ! If "/OVERFLOW = NODEC" not set
: 419 0710 3
: 420 0711 2 END;
: 421 0712 1 END: ! End of routine BASS\$CVTHP

	OFFC 00000	.ENTRY		:
59	04 AC D0 00002	MOVL	R10, R11	0650
58	08 AC D0 00006	MOVL	DEST, R9	0701
57	0C AC D0 0000A	MOVL	DESTLEN, R8	
56	10 AC D0 0000E	MOVL	SRC, R7	
	00000000G 00 16 00012	JSB	OTSSCVTHP R9	
28	50 E8 00018	BLBS	STATUS, 3\$	0702
50	5D D0 0001B	MOVL	FP, FMP	0706
50	OC A0 D0 0001E	MOVL	12(FMP), FMP	
51	00000000G 00 9E 00022	MOVAB	BASSHANDLER, R1	
51	60 D1 00029	CMPL	(FMP), R1	
	04 13 0002C	BEQL	2\$	
	50 D5 0002E	TSTL	FMP	
	EC 12 00030	BNEQ	1\$	
	50 D5 00032	TSTL	FMP	0707
	10 13 00034	BEQL	3\$	
0B	E6 A0 00G	BBC	#10, -26(FMP), 3\$	
	7E 00 00036	MOVZBL	#BASSK_DECERR, -(SP)	0709
	01 FB 0003B	CALLS	#1, BASS\$SIGNAL	
	04 00046 3\$:	RET		0712

; Routine Size: 71 bytes, Routine Base: _BASS\$CODE + 0005

```
: 423 0713 1 %SBTTL 'BASS$CVTRFP - Convert float to packed (rounded)'  
424 0714 1 GLOBAL ROUTINE BASS$CVTRFP (                                ! Convert float to packed (rounded)  
425 0715 1           DEST,                                         ! place to store conv. number  
426 0716 1           DESTLEN,                                       ! number of digits in dest  
427 0717 1           SRC,                                         ! number to be converted  
428 0718 1           SCALE,                                        ! power of ten to mult src  
429 0719 1           ) : NOVALUE =  
430 0720 1  
431 0721 1      ++  
432 0722 1      FUNCTIONAL DESCRIPTION:  
433 0723 1  
434 0724 1          Converts a single floating number to packed using rounding.  
435 0725 1  
436 0726 1      CALLING SEQUENCE:  
437 0727 1  
438 0728 1          BASS$CVTRFP (DEST.wp.r, DESTLEN.rl.v, SRC.rf.r, SCALE.rl.v)  
439 0729 1  
440 0730 1      FORMAL PARAMETERS:  
441 0731 1  
442 0732 1          DEST.wp.r       place to store the converted number  
443 0733 1          DESTLEN.rl.v   number of digits in the destination  
444 0734 1          SRC.rf.r       number to be converted  
445 0735 1          SCALE.rl.v    power of ten by which the internal  
446 0736 1          representation of the source must be  
447 0737 1          multiplied to scale the same as the  
448 0738 1          internal representation of the dest.  
449 0739 1  
450 0740 1      IMPLICIT INPUTS:  
451 0741 1          NONE  
452 0742 1  
453 0743 1  
454 0744 1      IMPLICIT OUTPUTS:  
455 0745 1          NONE  
456 0746 1  
457 0747 1  
458 0748 1      COMPLETION STATUS:  
459 0749 1          NONE  
460 0750 1  
461 0751 1  
462 0752 1      SIDE EFFECTS:  
463 0753 1  
464 0754 1          May signal decimal overflow if an error occurs in the OTS  
465 0755 1          conversion routine  
466 0756 1  
467 0757 1      --  
468 0758 1  
469 0759 2      BEGIN  
470 0760 2  
471 0761 2      LOCAL  
472 0762 2          FMP : REF BLOCK [0, BYTE] FIELD (BSF$FC0),      ! Ptr to BASIC frame  
473 0763 2          STATUS;  
474 0764 2  
475 0765 2          STATUS = OTSS$CVTRFP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);  
476 0766 3          IF (NOT .STATUS)  
477 0767 2          THEN  
478 0768 3          BEGIN  
479 0769 3
```

BASS\$CVTRP
1-004

BASS\$CVTRP - Convert real to packed
BASS\$CVTRFP - Convert float to packed (rounded)

N 8
16-Sep-1984 00:16:29
14-Sep-1984 11:54:49
VAX-11 Bliss-32 V4.0-742
[BASRTL.SRC]BASCVTRP.B32;1

Page 13
(7)

```
: 480    0770 3      FIND_FRAME (FMP);          ! Find BASIC frame
: 481    0771 3      IF (.FMP NEQ 0) AND (.FMP [BSFSW_FCD_FLAGS] AND BSFSM_FCD_DV) NEQ 0
: 482    0772 3      THEN
: 483    0773 3      BAS$$SIGNAL (BASSK_DECERR);
: 484    0774 3
: 485    0775 2      END;
: 486    0776 1      END:                                ! routine BASS$CVTRFP
```

		OFFC 00000	.ENTRY	BASS\$CVTRFP, Save R2,R3,R4,R5,R6,R7,R8,R9,- R10,R11	0714
59	04	AC D0 00002	MOVL	DEST, R9	0765
58	08	AC D0 00006	MOVL	DESTLEN, R8	
57	0C	AC D0 0000A	MOVL	SRC, R7	
56	10	AC D0 0000E	MOVL	SCALE, R6	
	00000000G	00 16 00012	JSB	OTSS\$CVTRFP_R9	
28	50	E8 00018	BLBS	STATUS, 3\$	0766
50	5D	D0 00018	MOVL	FP, FMP	0770
50	0C	A0 D0 0001E	1\$:	12(FMP), FMP	
51	00000000G	00 9E 00022	MOVAB	BASS\$HANDLER, R1	
51	60	D1 00029	Cmpl	(FMP), R1	
	04	13 0002C	BEQL	2\$	
	50	D5 0002E	TSTL	FMP	
	EC	12 00030	BNEQ	1\$	
	50	D5 00032	2\$:	TSTL	0771
	10	13 00034	BEQL	FMP	
OB	E6	A0 00G	0A E1 00036	BBC #10, -26(FMP), 3\$	
	7E	00G	8F 9A 00038	MOVZBL #BASSK_DECERR, -(SP)	0773
	00	01 FB 0003F	01 04 00046	CALLS #1, BAS\$\$SIGNAL	
			3\$:	RET	0776

: Routine Size: 71 bytes. Routine Base: _BASS\$CODE + 011C

B 9

```
: 488 0777 1 %SBTTL 'BASS$CVTRDP - Convert double to packed (rounded)'
: 489 0778 1 GLOBAL ROUTINE BASS$CVTRDP (
: 490 0779 1      DEST,
: 491 0780 1      DESTLEN,
: 492 0781 1      SRC,
: 493 0782 1      SCALE
: 494 0783 1      ) : NOVALUE =
: 495 0784 1
: 496 0785 1      ++
: 497 0786 1      FUNCTIONAL DESCRIPTION:
: 498 0787 1      Converts a double floating number to packed using rounding.
: 499 0788 1
: 500 0789 1      CALLING SEQUENCE:
: 501 0790 1      BASS$CVTRDP (DEST.wp.r, DESTLEN.rl.v, SRC.rd.r, SCALE.rl.v)
: 502 0791 1
: 503 0792 1      FORMAL PARAMETERS:
: 504 0793 1
: 505 0794 1      DEST.wp.r      place to store the converted number
: 506 0795 1      DESTLEN.rl.v   number of digits in the destination
: 507 0796 1      SRC.rd.r      number to be converted
: 508 0797 1      SCALE.rl.v    power of ten by which the internal
: 509 0798 1      representation of the source must be
: 510 0799 1      multiplied to scale the same as the
: 511 0800 1      internal representation of the dest.
: 512 0801 1
: 513 0802 1
: 514 0803 1
: 515 0804 1      IMPLICIT INPUTS:
: 516 0805 1      NONE
: 517 0806 1
: 518 0807 1
: 519 0808 1      IMPLICIT OUTPUTS:
: 520 0809 1      NONE
: 521 0810 1
: 522 0811 1
: 523 0812 1      COMPLETION STATUS:
: 524 0813 1
: 525 0814 1
: 526 0815 1
: 527 0816 1      SIDE EFFECTS:
: 528 0817 1
: 529 0818 1      May signal decimal overflow if overflow occurs in the OTS
: 530 0819 1      conversion routine
: 531 0820 1
: 532 0821 1      --
: 533 0822 1
: 534 0823 2      BEGIN
: 535 0824 2
: 536 0825 2      LOCAL
: 537 0826 2      FMP : REF BLOCK [0,BYTE] FIELD (BSF$FCD),      ! Ptr to BASIC frame
: 538 0827 2      STATUS;
: 539 0828 2
: 540 0829 2      STATUS = OTSS$CVTRDP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);
: 541 0830 3      IF (NOT .STATUS)
: 542 0831 2      THEN
: 543 0832 3      BEGIN
: 544 0833 3
```

```

: 545    0834 3      FIND_FRAME (FMP);          ! Find BASIC frame
: 546    0835 3      IF (.FMP NEQ 0) AND (.FMP [BSFSW_FCD_FLAGS] AND BSFSM_FCD_DV) NEQ 0
: 547    0836 3      THEN                                ! If "/OVERFLOW = NODEC" not set
: 548    0837 3      BAS$$SIGNAL (BASSK_DECERR);
: 549    0838 3
: 550    0839 2      END;
: 551    0840 1      END;                            ! End of routine BASS$CVTRDP

```

	OFFC 00000	.ENTRY	BASS\$CVTRDP, Save R2,R3,R4,R5,R6,R7,R8,R9,-	0778
59	04	AC D0 00002	MOVL DEST, R9	0829
58	08	AC D0 00006	MOVL DESTLEN, R8	
57	0C	AC D0 0000A	MOVL SRC, R7	
56	10	AC D0 0000E	MOVL SCALE, R6	
	00000000G	00 16 00012	JSB OTSSCVTRDP_R9	
2B		50 E8 00018	BLBS STATUS, 3\$	0830
50		5D D0 0001B	MOVL FP, FMP	0834
50	0C	A0 D0 0001E	1\$: MOVL 12(FMP), FMP	
51	00000000G	00 9E 00022	MOVAB BASSHANDLER, R1	
51		60 D1 00029	CMPL (FMP), R1	
		04 13 0002C	BEQL 2\$	
		50 D5 0002E	TSTL FMP	
		EC 12 00030	BNEQ 1\$	
		50 D5 00032	2\$: TSTL FMP	0835
		10 13 00034	BEQL 3\$	
OB	E6 A0	0A E1 00036	BB#10, -26(FMP), 3\$	
	7E	00G 8F 9A 0003B	MOVZBL #BASSK_DECERR, -(SP)	0837
		01 FB 0003F	CALIS #1, BAS\$\$SIGNAL	
	00000000G	04 00046	3\$: RET	0840

: Routine Size: 71 bytes, Routine Base: _BASS\$CODE + 0163

```

: 553 0841 1 %SBTTL 'BASS$CVTRGP - Convert gfloat to packed (rounded)'
: 554 0842 1 GLOBAL ROUTINE BASS$CVTRGP (
: 555 0843 1           DEST,
: 556 0844 1           DESTLEN,
: 557 0845 1           SRC,
: 558 0846 1           SCALE
: 559 0847 1           ) : NOVALUE =
: 560 0848 1
: 561 0849 1 !++
: 562 0850 1     FUNCTIONAL DESCRIPTION:
: 563 0851 1
: 564 0852 1     Converts a g floating number to packed using rounding.
: 565 0853 1
: 566 0854 1     CALLING SEQUENCE:
: 567 0855 1
: 568 0856 1     BASS$CVTRGP (DEST.wp.r, DESTLEN.rl.v, SRC.rg.r, SCALE.rl.v)
: 569 0857 1
: 570 0858 1     FORMAL PARAMETERS:
: 571 0859 1
: 572 0860 1           DEST.wp.r      place to store the converted number
: 573 0861 1           DESTLEN.rl.v   number of digits in the destination
: 574 0862 1           SRC.rg.r      number to be converted
: 575 0863 1           SCALE.rl.v    power of ten by which the internal
: 576 0864 1           representation of the source must be
: 577 0865 1           multiplied to scale the same as the
: 578 0866 1           internal representation of the dest.
: 579 0867 1
: 580 0868 1     IMPLICIT INPUTS:
: 581 0869 1           NONE
: 582 0870 1
: 583 0871 1
: 584 0872 1     IMPLICIT OUTPUTS:
: 585 0873 1           NONE
: 586 0874 1
: 587 0875 1
: 588 0876 1     COMPLETION STATUS:
: 589 0877 1           NONE
: 590 0878 1
: 591 0879 1
: 592 0880 1
: 593 0881 1
: 594 0882 1     SIDE EFFECTS:
: 595 0883 1           May signal decimal overflow if that error occurs in the OTS
: 596 0884 1           conversion routine
: 597 0885 1
: 598 0886 1
: 599 0887 2     BEGIN
: 600 0888 2
: 601 0889 2     LOCAL
: 602 0890 2           FMP : REF BLOCK [0,BYTE] FIELD (BSF$FC0),      ! Ptr to BASIC frame
: 603 0891 2           STATUS;
: 604 0892 2
: 605 0893 2           STATUS = OTSS$CVTRGP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);
: 606 0894 3           IF (NOT .STATUS)
: 607 0895 2           THEN
: 608 0896 3           BEGIN
: 609 0897 3

```

BASSCVTRP
1-004

BASSCVTRP - Convert real to packed
BASSCVTRGP - Convert gfloat to packed (rounded)

E 9

16-Sep-1984 00:16:29

VAX-11 Bliss-32 V4.0-742
[BASRTL.SRC]BASCVTRP.B32;1

Page 17
(9)

: 610 0898 3 FIND_FRAME (FMP);
: 611 0899 3 IF (.FMP NEQ 0) AND (.FMP [BSFSW_FCD_FLAGS] AND BSFSM_FCD_DV) NEQ 0 ! Find BASIC frame
: 612 0900 3 THEN ! If "/OVERFLOW = NODEC" not set
: 613 0901 3 BAS\$SIGNAL (BASSK_DECERR);
: 614 0902 3
: 615 0903 2 END:
: 616 0904 1 END: ! End of routine BASSCVTRGP

		OFFC 00000	.ENTRY	BASSCVTRGP, Save R2,R3,R4,R5,R6,R7,R8,R9,-	:	0842
		59 04 AC D0 00002	MOVL	DEST, R9		0893
		58 08 AC D0 00006	MOVL	DESTLEN, R8		
		57 0C AC D0 0000A	MOVL	SRC, R7		
		56 10 AC D0 0000E	MOVL	SCALE, R6		
		00000000G 00 16 00012	/SB	OTSSCVTRGP_R9		
		28 50 E8 00018	BLBS	STATUS, 3\$		0894
		50 5D D0 0001B	MOVL	FP, FMP		0898
		50 0C A0 D0 0001E	1\$: MOVL	12(FMP), FMP		
		51 00000000G 00 9E 00022	MOVAB	BASSHANDLER, R1		
		51 60 D1 00029	CMPL	(FMP), R1		
		04 13 0002C	BEQL	2\$		
		50 D5 0002E	TSTL	FMP		
		EC 12 00030	BNEQ	1\$		
		50 D5 00032	2\$: TSTL	FMP		0899
		10 13 00034	BEQL	3\$		
		OB E6 A0 00G 8F 9A 00036	BBC	#10, -26(FMP), 3\$		
		7E 01 FB 00038	MOVZBL	#BASSK_DECERR, -(SP)		0901
		04 00046 3\$: CALLS	CALLS	#1, BAS\$SIGNAL		
			RET			0904

; Routine Size: 71 bytes, Routine Base: _BAS\$CODE + 01AA

```

: 618 0905 1 %SBTTL 'BASS$CVTRHP - Convert hfloat to packed (rounded)'
: 619 0906 1 GLOBAL ROUTINE BASS$CVTRHP (
: 620 0907 1      DEST,
: 621 0908 1      DESTLEN,
: 622 0909 1      SRC,
: 623 0910 1      SCALE
: 624 0911 1      ) : NOVALUE =
: 625 0912 1
: 626 0913 1 ++
: 627 0914 1      FUNCTIONAL DESCRIPTION:
: 628 0915 1
: 629 0916 1      Converts a h floating number to packed using rounding.
: 630 0917 1
: 631 0918 1      CALLING SEQUENCE:
: 632 0919 1
: 633 0920 1      BASS$CVTRHP (DEST.wp.r, DESTLEN.rl.v, SRC.rh.r, SCALE.rl.v)
: 634 0921 1
: 635 0922 1      FORMAL PARAMETERS:
: 636 0923 1
: 637 0924 1      DEST.wp.r      place to store the converted number
: 638 0925 1      DESTLEN.rl.v   number of digits in the destination
: 639 0926 1      SRC.rh.r      number to be converted
: 640 0927 1      SCALE.rl.v    power of ten by which the internal
: 641 0928 1      representation of the source must be
: 642 0929 1      multiplied to scale the same as the
: 643 0930 1      internal representation of the dest.
: 644 0931 1
: 645 0932 1      IMPLICIT INPUTS:
: 646 0933 1      NONE
: 647 0934 1
: 648 0935 1
: 649 0936 1      IMPLICIT OUTPUTS:
: 650 0937 1
: 651 0938 1      NONE
: 652 0939 1
: 653 0940 1      COMPLETION STATUS:
: 654 0941 1
: 655 0942 1      May signal decimal overflow if that error occurs in the OTS
: 656 0943 1      conversion routine
: 657 0944 1
: 658 0945 1      SIDE EFFECTS:
: 659 0946 1
: 660 0947 1      NONE
: 661 0948 1
: 662 0949 1      --
: 663 0950 1
: 664 0951 2      BEGIN
: 665 0952 2
: 666 0953 2      LOCAL
: 667 0954 2      FMP : REF BLOCK [0, BYTE] FIELD (BSF$FC0),      ! Ptr to BASIC frame
: 668 0955 2      STATUS;
: 669 0956 2
: 670 0957 2      STATUS = OTSSCVTRHP_R9 (.SCALE, .SRC, .DESTLEN, .DEST);
: 671 0958 2      IF (NOT .STATUS)
: 672 0959 2      THEN
: 673 0960 2      BEGIN
: 674 0961 2

```

```

: 675    0962 3      FIND_FRAME (FMP);
: 676    0963 3      IF (.FMP NEQ 0) AND (.FMP [BSFW_FCD_FLAGS] AND BSFSM_FCD_DV) NEQ 0
: 677    0964 3      THEN
: 678    0965 3      BASS$SIGNAL (BASSK_DECERR);
: 679    0966 3
: 680    0967 2      END;
: 681    0968 1      END;                                ! End of routine BASSCVTRHP

```

		OFFC 00000	.ENTRY	BASSCVTRHP, Save R2,R3,R4,R5,R6,R7,R8,R9,-	; 0906	
59	04	AC D0 00002	MOVL	R10, R11		
58	08	AC D0 00006	MOVL	DEST, R9	; 0957	
57	OC	AC D0 0000A	MOVL	DESTLEN, R8		
56	10	AC D0 0000E	MOVL	SRC, R7		
	00000000G	00 16 00012	JSB	SCALE, R6		
2B	50	E8 00018	BLBS	OTSSCVTRHP_R9		
50	5D	D0 0001B	MOVL	STATUS, 3\$; 0958	
50	OC	A0 0001E	1\$:	MOVL	FP, FMP	0962
51	00000000G	00 9E 00022	MOVAB	12(FMP), FMP		
51	60	D1 00029	CMPL	BASSHANDLER, R1		
	04	13 0002C	BEQL	(FMP), R1		
	50	D5 0002E	TSTL	2\$		
	EC	12 00030	BNEQ	FMP		
	50	D5 00032	2\$:	TSTL	1\$	
	10	13 00034	BEQL	FMP	0963	
08	E6 A0	0A E1 00036	BBC	3\$		
	7E	00G 8F 9A 0003B	MOVZBL	#10, -26(FMP), 3\$		
	00	01 FB 0003F	CALLS	#BASSK_DECERR, -(SP)	0965	
		04 00046 3\$:	RET	#1, BASS\$SIGNAL		
					0968	

: Routine Size: 71 bytes, Routine Base: _BASS\$CODE + 01F1

```

: 683 0969 1 %SBTTL 'BASSCVTPF - Convert packed to float'
: 684 0970 1 GLOBAL ROUTINE BASSCVTPF (
: 685 0971 1      DEST,
: 686 0972 1      SRC,
: 687 0973 1      SRCLEN,
: 688 0974 1      SCALE
: 689 0975 1      ) : NOVALUE =
: 690 0976 1
: 691 0977 1 ++
: 692 0978 1      FUNCTIONAL DESCRIPTION:
: 693 0979 1
: 694 0980 1      Converts a packed number to single floating.
: 695 0981 1
: 696 0982 1      CALLING SEQUENCE:
: 697 0983 1
: 698 0984 1      BASSCVTPF (DEST.wf.r, SRC.rf.r, SRCLEN.rl.v, SCALE.rl.v)
: 699 0985 1
: 700 0986 1      FORMAL PARAMETERS:
: 701 0987 1
: 702 0988 1      DEST.wf.r      place to store the converted number
: 703 0989 1      SRC.rf.r      number to be converted
: 704 0990 1      SRCLEN.rl.v   number of digits in the source
: 705 0991 1      SCALE.rl.v    power of ten by which the internal
: 706 0992 1      representation of the sourc must be
: 707 0993 1      multiplied to scale the same as the
: 708 0994 1      internal representation of the dest.
: 709 0995 1
: 710 0996 1      IMPLICIT INPUTS:
: 711 0997 1
: 712 0998 1      NONE
: 713 0999 1
: 714 1000 1      IMPLICIT OUTPUTS:
: 715 1001 1
: 716 1002 1
: 717 1003 1
: 718 1004 1      COMPLETION STATUS:
: 719 1005 1
: 720 1006 1
: 721 1007 1
: 722 1008 1      SIDE EFFECTS:
: 723 1009 1
: 724 1010 1
: 725 1011 1
: 726 1012 1      --
: 727 1013 1
: 728 1014 2      BEGIN
: 729 1015 2
: 730 1016 2      OTSSCVTPF_R9 (.SCALE, .SRCLEN, .SRC, .DEST);
: 731 1017 2
: 732 1018 1      END:                                ! End of routine BASSCVTPF

```

BASS\$CVTRP
1-004

BASS\$CVTRP - Convert real to packed
BASS\$CVTPF - Convert packed to float

I 9
16-Sep-1984 00:16:29 VAX-11 Bliss-32 V4.0-742
14-Sep-1984 11:54:49 [BASRTL.SRC]BASCVTRP.B32;1

Page 21
(11)

59	04	AC	D0	00002	MOVL	DEST, R9
58	08	AC	D0	00006	MOVL	SRC, R8
57	0C	AC	D0	0000A	MOVL	SRCLEN, R7
56	10	AC	D0	0000E	MOVL	SCALE, R6
00000000G				00 16 00012	JSB	OTSS\$CVTPF_R9
				04 00018	RET	

; 1016

; 1018

; Routine Size: 25 bytes, Routine Base: _BASS\$CODE + 0238

```

734      1019 1 %SBTTL 'BASSCVTPD - Convert packed to double'
735      1020 1 GLOBAL ROUTINE BASSCVTPD (
736          1   DEST,
737          1   SRC,
738          1   SRCLEN,
739          1   SCALE
740          1 ) : NOVALUE =
741
742          1 ++
743          1  FUNCTIONAL DESCRIPTION:
744          1
745          1 Converts a packed number to double floating.
746          1
747          1 CALLING SEQUENCE:
748          1
749          1 BASSCVTPD (DEST.wp.r, SRC.rf.r, SRCLEN.rl.v, SCALE.rl.v)
750          1
751          1 FORMAL PARAMETERS:
752          1
753          1 DEST.wd.r      place to store the converted number
754          1 SRC.rp.r      number to be converted
755          1 SRCLEN.rl.v    number of digits in source
756          1 SCALF.rl.v    power of ten by which the internal
757          1                   representation of the sourc must be
758          1                   multiplied to scale the same as the
759          1                   internal representation of the dest.
760          1
761          1 IMPLICIT INPUTS:
762          1
763          1          NONE
764          1
765          1 IMPLICIT OUTPUTS:
766          1
767          1          NONE
768          1
769          1 COMPLETION STATUS:
770          1
771          1          NONE
772          1
773          1 SIDE EFFECTS:
774          1
775          1          NONE
776          1
777          1          --
778          1
779          1          BEGIN
780          1
781          1          OTSSCVTPD_R9 (.SCALE, .SRCLEN, .SRC, .DEST);
782          1
783          1          END;                                ! End of routine BASSCVTPD

```

BASS\$CVTRP
1-004

BASS\$CVTRP - Convert real to packed
BASS\$CVTPD - Convert packed to double

K 9
16-Sep-1984 00:16:29 14-Sep-1984 11:54:49 VAX-11 Bliss-32 v4.0-742
[BASRTL.SRC]BASCVTRP.B32;1

Page 23
(12)

59	04	AC	DD	00002	MOVL	DEST, R9
58	08	AC	DD	00006	MOVL	SRC, R8
57	0C	AC	DD	0000A	MOVL	SRCLEN, R7
56	10	AC	DD	0000E	MOVL	SCALE, R6
00000000G				00 16 00012	JSB	OTSSCVTPD_R9
				04 00018	RET	

; 1064

; 1068

; Routine Size: 25 bytes, Routine Base: _BASS\$CODE + 0251

```

785 1069 1 %SBTTL 'BASS$CVTPG - Convert packed to gfloat'
786 1070 1 GLOBAL ROUTINE BASS$CVTPG (
787 1071 1      DEST,
788 1072 1      SRC,
789 1073 1      SRCLEN,
790 1074 1      SCALE
791 1075 1      ) : NOVALUE =
792 1076 1
793 1077 1 ++
794 1078 1      FUNCTIONAL DESCRIPTION:
795 1079 1
796 1080 1      Converts a packed number to g floating.
797 1081 1
798 1082 1      CALLING SEQUENCE:
799 1083 1
800 1084 1      BASS$CVTPG (DEST.wg.r, SRC.rp.r, SRCLEN.rl.v, SCALE.rl.v)
801 1085 1
802 1086 1      FORMAL PARAMETERS:
803 1087 1
804 1088 1      DEST.wg.r      place to store the converted number
805 1089 1      SRC.rp.r      number to be converted
806 1090 1      SRCLEN.rl.v   number of digits in the destination
807 1091 1      SCALE.rl.v    power of ten by which the internal
808 1092 1      representation of the source must be
809 1093 1      multiplied to scale the same as the
810 1094 1      internal representation of the dest.
811 1095 1
812 1096 1      IMPLICIT INPUTS:
813 1097 1
814 1098 1      NONE
815 1099 1
816 1100 1      IMPLICIT OUTPUTS:
817 1101 1
818 1102 1      NONE
819 1103 1
820 1104 1      COMPLETION STATUS:
821 1105 1
822 1106 1      NONE
823 1107 1
824 1108 1      SIDE EFFECTS:
825 1109 1
826 1110 1      NONE
827 1111 1
828 1112 1      --
829 1113 1
830 1114 2      BEGIN
831 1115 2
832 1116 2      OTSS$CVTPG_R9 (.SCALE, .SRCLEN, .SRC, .DEST);
833 1117 2
834 1118 1      END;                      ! End of routine BASS$CVTPG

```

0FFC 00000

.ENTRY BASS\$CVTPG, Save R2,R3,R4,R5,R6,R7,R8,R9,- : 1070
 R10,R11

BASS\$CVTRP
1-004

BASS\$CVTRP - Convert real to packed
BASS\$CVTPG - Convert packed to gfloat

M 9
16-Sep-1984 00:16:29 VAX-11 Bliss-32 V4.0-742
14-Sep-1984 11:54:49 [BASRTL.SRC]BASCVTRP.B32;1

Page 25
(13)

59	04	AC	D0	00002	MOVL	DEST, R9
58	08	AC	D0	00006	MOVL	SRC, R8
57	0C	AC	D0	0000A	MOVL	SRCLEN, R7
56	10	AC	D0	0000E	MOVL	SCALE, R6
00000000G 00 16 00012				JSB	OTSS\$CVTPG_R9	
04 00018				RET		

; 1116

; 1118

; Routine Size: 25 bytes, Routine Base: _BASS\$CODE + 026A

```

836    1119 1 %SBTTL 'BASS$CVTPH - Convert packed to hfloat'
837    1120 1 GLOBAL ROUTINE BASS$CVTPH (
838    1121 1      DEST,
839    1122 1      SRC,
840    1123 1      SRCLEN,
841    1124 1      SCALE
842    1125 1      ) : NOVALUE =
843    1126 1
844    1127 1      ++
845    1128 1      FUNCTIONAL DESCRIPTION:
846    1129 1
847    1130 1      Converts a packed number to floating.
848    1131 1
849    1132 1      CALLING SEQUENCE:
850    1133 1
851    1134 1      BASS$CVTPH (DEST.wh.r, SRC_rp.r, SRCLEN_rl.v, SCALE.rl.v)
852    1135 1
853    1136 1      FORMAL PARAMETERS:
854    1137 1
855    1138 1      DEST.wh.r      place to store the converted number
856    1139 1      SRC_rp.r      number to be converted
857    1140 1      SRCLEN_rl.v  number of digits in the source
858    1141 1      SCALE.rl.v   power of ten by which the internal
859    1142 1
860    1143 1      representation of the source must be
861    1144 1      multiplied to scale the same as the
862    1145 1      internal representation of the dest.
863    1146 1      IMPLICIT INPUTS:
864    1147 1      NONE
865    1148 1
866    1149 1      IMPLICIT OUTPUTS:
867    1150 1      NONE
868    1151 1
869    1152 1      NONE
870    1153 1
871    1154 1      COMPLETION STATUS:
872    1155 1      NONE
873    1156 1
874    1157 1      NONE
875    1158 1      SIDE EFFECTS:
876    1159 1
877    1160 1      NONE
878    1161 1
879    1162 1      --
880    1163 1
881    1164 2      BEGIN
882    1165 2
883    1166 2      OTSSCVTPH_R9 (.SCALE, .SRCLEN, .SRC, .DEST);
884    1167 2
885    1168 1      END;                                ! End of routine BASS$CVTPH

```

BASS\$CVTRP
1-004

BASS\$CVTRP - Convert real to packed
BASS\$CVTPH - Convert packed to hfloat

B 10
16-Sep-1984 00:16:29 VAX-11 Bliss-32 V4.0-742
14-Sep-1984 11:54:49 [BASRTL.SRC]BASCVTRP.B32;1

Page 27
(14)

59	04	AC	DO	00002	MOVL	DEST, R9
58	08	AC	DO	00006	MOVL	SRC, R8
57	0C	AC	DO	0000A	MOVL	SRCLEN, R7
56	10	AC	DO	0000E	MOVL	SCALE, R6
00000000G 00 16 00012				JSB	OTSS\$CVTPH_R9	
04 00018				RET		

; 1166
;
; 1168

: Routine Size: 25 bytes. Routine Base: _BASS\$CODE + 0283

: 886 1169 1 !<BLF/PAGE>

BAS\$CVTRP
1-004

BASS\$CVTRP - Convert real to packed
BASS\$CVTPH - Convert packed to hfloat

C 10
16-Sep-1984 00:16:29 VAX-11 Bliss-32 v4.0-742
14-Sep-1984 11:54:49 [BASRTL.SRC]BASCVTRP.B32;1

Page 28
(15)

: 888 1170 1 END
: 889 1171 1
: 890 1172 0 ELUDOM

: ! End of module BASS\$CVTRP

PSECT SUMMARY

Name	Bytes	Attributes
_BASS\$CODE	668	NOVEC,NOWRT, RD , EXE, SHR, LCL, REL, CON, PIC,ALIGN(2)

Library Statistics

File	Total	Symbols	Pages Mapped	Processing Time
\$_\$255\$DUA2B:[SYSLIB]STARLET.L32;1	9776	0	581	00:01.1

COMMAND QUALIFIERS

: BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/NOTRACE/LIS=LISS:BASCVTRP/OBJ=OBJ\$:BASCVTRP MSRC\$:\$BASCVTRP/UPDATE=(ENH\$:\$BASCVTRP)

: Size: 668 code + 0 data bytes
: Run Time: 00:15.1
: Elapsed Time: 00:32.6
: Lines/CPU Min: 4669
: Lexemes,CPU-Min: 14836
: Memory Used: 67 pages
: Compilation Complete

0021 AH-BT13A-SE
VAX/VMS V4.0

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